

**SMO / Smoothened Antibody (N-Terminal)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS10564****Specification**

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**SMO / Smoothened Antibody (N-Terminal) - Product Information**

Application	IHC
Primary Accession	<a href="#">Q99835</a>
Reactivity	Human, Mouse, Rabbit, Hamster, Monkey, Pig, Horse, Bovine, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	86kDa KDa

**SMO / Smoothened Antibody (N-Terminal) - Additional Information****Gene ID** 6608**Other Names**

Smoothened homolog, SMO, Protein Gx, SMO, SMOH

**Target/Specificity**

Human SMO. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

**Reconstitution & Storage**

Long term: -70°C; Short term: +4°C

**Precautions**

SMO / Smoothened Antibody (N-Terminal) is for research use only and not for use in diagnostic or therapeutic procedures.

**SMO / Smoothened Antibody (N-Terminal) - Protein Information****Name** SMO**Synonyms** SMOH**Function**

G protein-coupled receptor which associates with the patched protein (PTCH) to transduce hedgehog protein signaling. Binding of sonic hedgehog (SHH) to its receptor patched prevents inhibition of smoothened (SMO) by patched. When active, SMO binds to and sequesters protein kinase A catalytic subunit PRKACA at the cell membrane, preventing PRKACA-mediated phosphorylation of GLI transcription factors which releases the GLI proteins from PRKACA-mediated inhibition and allows for transcriptional activation of hedgehog pathway target genes (By similarity). Required for the accumulation of KIF7, GLI2 and GLI3 in the cilia (PubMed:<a href="http://www.uniprot.org/citations/19592253" target="\_blank">19592253</a>). Interacts with DLG5 at the ciliary base to induce the accumulation of KIF7 and GLI2 at the ciliary tip for GLI2

activation (By similarity).

#### **Cellular Location**

Cell membrane {ECO:0000250|UniProtKB:P56726}; Multi-pass membrane protein. Cell projection, cilium. Note=Cilium localization is promoted by SHH and is required for activity. {ECO:0000250|UniProtKB:P56726}

#### **Volume**

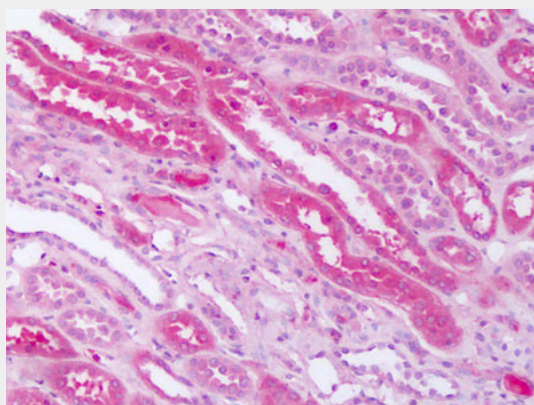
50 µl

### **SMO / Smoothened Antibody (N-Terminal) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **SMO / Smoothened Antibody (N-Terminal) - Images**



Human Kidney: Formalin-Fixed Paraffin-Embedded (FFPE)

### **SMO / Smoothened Antibody (N-Terminal) - Background**

G protein-coupled receptor that probably associates with the patched protein (PTCH) to transduce the hedgehog's proteins signal. Binding of sonic hedgehog (SHH) to its receptor patched is thought to prevent normal inhibition by patched of smoothened (SMO). Required for the accumulation of KIF7 and GLI3 in the cilia.

### **SMO / Smoothened Antibody (N-Terminal) - References**

- Stone D.M., et al. Nature 384:129-134(1996).  
Xie J., et al. Nature 391:90-92(1998).  
Jiang N., et al. Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.  
Scherer S.W., et al. Science 300:767-772(2003).  
Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

